



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

MM92/0327

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APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/574,276	05/19/00	014	PHILOGENE, H 2921	03/27/01
First Named Applicant	35 USC 154(b) term ext. = 0 Days.			

TITLE OF INVENTION
ELECTRONIC BALLAST SYSTEM

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
3 29347/990046	315-224.000	E24	UTILITY	NO	\$1240.00	06/27/01

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.

HOW TO RESPOND TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

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Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/574,276 05/19/00 KIM

D 29347/990046

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EXAMINER	
PHILOGENE, H	
ART UNIT	PAPER NUMBER

2821

DATE MAILED:
03/27/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Notice of Allowability

Application No.
09/574,276

Applicant(s)
Dae-Bong Kim et al.

Examiner
Haissa Philogene

Group Art Unit
2821



All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

☒ This communication is responsive to application filed on 5/19/00

☒ The allowed claim(s) is/are 1-17

☒ The drawings filed on May 19, 2000 are acceptable.

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☐ Applicant MUST submit NEW FORMAL DRAWINGS

☐ because the originally filed drawings were declared by applicant to be informal.

☐ including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. _____

☐ including changes required by the proposed drawing correction filed on _____, which has been approved by the examiner.

☐ including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

☐ Interview Summary, PTO-413

☐ Examiner's Amendment/Comment

☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

☒ Examiner's Statement of Reasons for Allowance

Haissa Philogene
Primary Examiner
09/19/2000

1. The following is an examiner's statement of reasons for allowance: The prior art fails to disclose an electronic ballast for use in illuminating a lamp comprising, inter alia, a power controller that compares a signal associated with a current flowing through the lamp to a signal associated with a desired lamp current and based on the comparison provides a correction current to a timing capacitor to control a duty cycle of an output of a pulse-width modulated signal generator; or a power of the voltage source being supplied through a first terminal of a lamp driving circuit and a power controller connected between a lamp driving circuit and a common terminal of a half bridge converter a current which changes flow directions and a lamp portion, said power controller detecting an amount of current supplied to the lamp portion and controlling a drive frequency of the lamp driving circuit based on the detected amount of current to control an output power of the lamp portion, as recited in independent claims 1 and 7, respectively, so as to prevent precise zero voltage switching control of the power switch, which increases the operating temperature thereof. Hence, the examiner has allowed claims 1 through 17.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Bogdan, Patent No. 6,137,240, "Universal ballast control circuit".

Wood, Patent No. 5,612,597, "Oscillating driver circuit with power factor correction, electronic lamp ballast employing same and driver method".

Mirskiy et al., Patent No. 5,973,455, "Electronic ballast with filament cut-out".

Gradzki et al., Patent No. 5,973,437, "Scheme for sensing ballast lamp current".

Zeiler, Patent No. 4,717,863, "Frequency modulation ballast circuit".

Gradzki, Patent No. 5,969,482, "Circuit arrangement for operating a discharge lamp including real power sensing using a single quadrant multiplier".

None of the above patents discloses the particular arrangement of the electronic ballast as recited.

Correspondence

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Haissa Philogene whose telephone number is (703) 305-3485.

4. Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0956.

Application Serial Number: 09/574,276
Office Action: 1

Art Unit: 2821
File Paper Number: 4

5. Papers related to Technology Center 2800 applications **only** may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Technology Center Fax Center number is (703) 308-7722 or (703) 308-7724.

 Haissa Philogene
Primary Examiner
A.U. 2821

Philogene Haissa

Examiner

Art Unit 2821

March 26, 2001